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CIWC Exhibit No. 2.0 2.1 2.2
Witness Cummings
Date 11/17/00 Reporter Fox

STATE OF ILLINOIS)
)
COUNTY OF VERMILION)

AFFIDAVIT

I, Craig M. Cummings, first being duly sworn upon oath depose and say that I am employed by Consumers Illinois Water Company, as Executive Vice President and General Manager; that I have read the attached and foregoing Direct Testimony of Craig M. Cummings in Docket Nos. 00-0337, 00-0338 and 00-0339 (consolidated), which is identified as CIWC Exhibit 2.0, as well as CIWC Exhibits 2.1 through 2.2 , which are attached thereto; that these documents were prepared by me or under my supervision and I know the contents thereof; that said contents are true in substance and in fact; and that CIWC Exhibits 2.0 through 2.2 are the testimony and exhibits I wish to give in this proceeding.

Further affiant sayeth not.

Craig M. Cummings

Subscribed and Sworn
to before me this
10 day of November, 2000.

Notary Public

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OFFICIAL SEAL
Julie A. Huff
Notary Public, State of Illinois
My commission expires 4-10-01

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CIWC EXHIBIT NO. 2.0

CONSUMERS ILLINOIS WATER COMPANY

DIRECT TESTIMONY
OF
CRAIG M. CUMMINGS

WITNESS IDENTIFICATION AND BACKGROUND

Q. Please state your name and business address.

A. Craig M. Cummings, 322 North Gilbert Street, Danville, Illinois 61834.

Q. By whom are you employed and in what capacity?

A. I am Executive Vice President and General Manager of Consumers Illinois Water Company ("CIWC" or "Company").

Q. Please state your educational, professional and business background and experience leading up to your current position.

A. I graduated from Eastern Illinois University, Charleston, Illinois in May 1980, receiving a Bachelor of Science Degree in Environmental Biology. My professional affiliations include the Illinois Section of American Water Works Association, in which I serve as the Section's Chair and also sit on the Education and Emergency Planning Committees. Other professional affiliations include the National Association of Water Companies and the Illinois Potable Water Supply Operators Association of which I served as President in 1998. I hold a Class A Water Operators Certification from the State of Illinois. I also serve as a certified laboratory analyst and Laboratory Director for the Company's Illinois Department of Public Health ("IDPH") regulated laboratory. Additionally, I am the Responsible Operator in Charge for the Division's distribution system.

My 20 years of water utility experience includes employment in 1979 as a summer university intern at Kankakee Water Company (now Consumers Illinois Water Company)

in which I worked in all phases of production and maintenance at the Kankakee treatment plant. Following my graduation from college in 1980, I worked as a laboratory analyst/operator for the City of DeKalb, Illinois, a deep well groundwater supply. During my employment with DeKalb, I was involved with the day-to-day maintenance and operation of the deep wells. I also attained top Illinois Environmental Protection Agency ("IEPA") certification as a water plant operator and was also certified by the IDPH to work in a water quality laboratory. In May 1983, I assumed the position of Treatment Technician/Laboratory Director with the City of Decatur, Illinois. In this position, I supervised the City's two treatment plants, including all operations and laboratory personnel. In May 1989, I assumed the position of Production Manager for Inter-State Water ("ISW") Company (now Consumers Illinois Water Company), in which I was responsible for the operations in the Production Department. My duties included, among other things, preparing yearly and long-term capital and operating budgets, personnel supervision, planning and design input for the construction of the new ISW treatment facility and the operation and maintenance of the Company's dam and source of supply, Lake Vermilion. I was promoted to my current position of Executive Vice President and General Manager in February 1994.

Q. What are your responsibilities as Executive Vice President and General Manager of CIWC?

A. I have overall responsibility of the day-to-day operations of the Vermilion County Division. I also assist the Company President and other officers in developing goals and objectives for the Company and in administering policies and procedures as approved by the Board of Directors of the Company. It is my responsibility to ensure that these goals and objectives are achieved. I, along with other Company officers, represent the Company before governmental and regulatory agencies. I, along with others, formulate financial objectives and budgets and provide the direction necessary to meet those objectives while remaining within budgetary guidelines. I am part of the management team, which establishes employee levels, working conditions, and safety requirements within guidelines established by the Board of Directors and the President of the Company. My responsibilities include establishing guidelines for negotiation of labor

contracts with the union representing employees in the Vermilion County Division, as well as other special contracts. I have the responsibilities associated with providing excellent customer service, developing and controlling the Company's operating and maintenance and capital budgets, as well as providing direction in the areas of construction, purchases or other acquisitions, operation, maintenance and protection of all property, facilities and equipment required to maintain water quality standards and continuity of service.

Q. Have you previously testified in regulatory matters?

A. Yes. I testified before this Commission in Consumers Illinois Water Company, Docket 95-0237, which addressed the need for land rights to conduct groundwater testing; Docket 97-0351, a rate proceeding; Docket 98-0265, a certificate case; and most recently in Docket 99-0449, a financing case.

Q. Are you familiar with the property, business and operations of the Vermilion County Division?

A. Yes, I am.

INTRODUCTION

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide background information regarding the rate filing for the Vermilion County Division. I will discuss the facilities and operations of the Vermilion County Division, and certain matters related to the capital projection developed for that Division. Finally, I will discuss business risks facing the Vermilion County Division.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I sponsor the E-Schedules of the Standard Information Requirements, which are set forth in CIWC Exhibit 12.0 for the Vermilion County Division. I also sponsor CIWC Exhibits 2.1 through 2.2. These Exhibits were prepared by me or under my supervision and direction.

VERMILION COUNTY DIVISION

Q. Please further describe the service area and facilities of the Vermilion County Division.

A. The Vermilion County Division provides residential, commercial, industrial and municipal water service, including fire protection, to customers located in Vermilion County, Illinois. The Division provides retail service to its customers in the City of Danville, Village of Tilton and adjacent areas in Vermilion County. The Division also provides wholesale service to the Villages of Catlin and Westville, respectively. The Company serves approximately 17,000 retail customers directly and through service provided by its wholesale customers, provides water service to a population of approximately 55,000.

The Division obtains its water supply from the North Fork of the Vermilion River on which there are two dams. The upper dam, built in 1925, forms an artificial reservoir known as Lake Vermilion. The second dam, located at the purification and pumping plants, creates an impoundage from which the raw water pumps take suction. There are four submersible, flood-proof raw water pumps ranging in size from 35 to 150 HP and capacities from 2 to 9 million gallons per day which lift untreated raw water to the treatment plant where it is treated with ferric chloride, lime, carbon dioxide, polymers, chlorine, hydrofluosilicic acid and powdered activated carbon. The water is mixed with these chemicals, allowed to settle and then filtered; it is chlorinated and stored in a 1.25 million-gallon clearwell before being pumped to the distribution system.

Four vertical turbine pumps ranging in size from 250 to 600 HP and capacities from 2 to 9 million gallons per day can be used to pump water to the distribution system. A 1,000 kW diesel-powered, electric generator provides emergency electric service to the water treatment plant and raw water pumping station in case of failure of the public power supply. The lime softening treatment process includes four Eimco Reactor Clarifiers; six dual-media filers and state-of-the-art instrumentation featuring distributed programmable logic controllers and personal computer control with graphics and report capabilities. The facilities are controlled and monitored by highly trained personnel.

The facility includes laboratory capabilities for process and quality control to assure customers the highest water quality. The distribution system is made up of 276 miles of mains ranging in size form 1" to 24", on which there are 17,783 meters and 1,428 public fire hydrants. The total Distribution Storage capacity is 7.8 million gallons. The bulk of the storage consists of two 3.0 million-gallon standpipes, and three elevated tanks that have a capacities of 1,000,000; 500,000; and 300,000 gallons. The 300,000-gallon elevated tank and an associated booster station serves a pressure zone that is located in the northern part of the service area. The 1,000,000-gallon water spheroid was constructed and placed in service on August 1, 1982. The Division purchased the 500,000 gallon elevated tank from the City of Danville in 1997. This tank serves the Eastgate Industrial Park.

In the twelve months ending December 31, 1999, the Division delivered to its distribution system approximately 2.975 billion gallons for a daily average of 8.150 million gallons. The maximum day occurred on July 16, 1999 with approximately 10.623 million gallons delivered. The peak pumpage per hour of .556 million gallons occurred on July 9, 1999.

PROPOSED RATE INCREASE

Q. Mr. Cummings, what is the percentage rate increase being sought by the Vermilion County Division in this proceeding?

A. The proposed new rates will increase the Division's annual operating revenue by approximately 21.75%.

Q. What are the primary reasons for proposing this increase in revenues?

A. As previously discussed, the last rate Order for the Vermilion County Division was issued in Docket 97-0351 (June 3, 1998). The rates established in that case were based on an adjusted 1996 test year. The adjusted test year levels of operating expenses and rate base have increased significantly since that time. For the 2001 test year, the rate of return on common equity capital for the Division has declined to 5.24 % at present rates. As will be discussed in more detail below, and in Mr. Winegard's testimony, the most significant factor affecting the need for increased revenue for the Vermilion County Division is the investment of approximately $6,000,000 in new facilities needed for compliance with nitrate and other environmental regulations ("Regulatory Compliance Facilities"). The Regulatory Compliance Facilities will begin operation in late 2000. The Company has reflected the cost of the Regulatory Compliance Facilities, and other necessary plant additions in the test year forecast. In addition, to properly recover the investment in plant, the Division has proposed new depreciation rates based on a study presented by Mr. Guastella. Additional factors affecting the need for increased revenues have been an overall decline in the Vermilion County Division's customer base and average consumption, as well as continued significant investment in aging infrastructure. Several businesses or business units have ceased operations since the last rate order. SMF, the Hyster customer service unit, APAC Telemarketing Services and Victory Beauty Supply have all ceased operations in the Vermilion County Division. Lastly, the Division continues to invest significant capital to correct multiple requirements in the distribution system as well as to replace aged infrastructure that has exceeded its useful life expectancy.

Q. Please discuss the E-Schedules of CIWC Exhibit 12.

A. Schedule E-1 is a copy all current tariff sheets for the Division. Schedule E-2 is a copy of the proposed tariff sheets. Schedule E-3 is a copy of the present tariff sheets which shows, in strikeout form, all existing rates and tariff language which the Company proposes to remove and shows, in underline form, all new rates and tariff language which the Company proposes to add. Schedule E-4 provides a narrative rationale for the proposed tariff changes. Schedule E-5 provides the billing units, which make up test year

revenue for each designated rate. Schedule E-6 provides calculations showing the derivation of jurisdictional revenues from each current rate schedule and each new rate schedule proposed by the Company. Schedule E-9 consists of bill comparisons by rate schedule and classification for each rate schedule.

PLANT INVESTMENT

Q. Have you prepared information showing the additions to plant from the time of the Division's last rate case through December 31, 1999?

A. Yes. This information is provided in CIWC Exhibit 2.1.

Q. Do you have an exhibit which shows the items included in the capital projection for the Vermilion County Division in 2000 and 2001?

A. Yes, these items are shown on CIWC Exhibit 2.2. As indicated, the largest category is Regulatory Compliance Facilities.

Q. Please further discuss the investment in Regulatory Compliance Facilities.

A. The Regulatory Compliance Facilities are necessary to comply with environmental law and regulations. The largest component of the Regulatory Compliance Facilities is for nitrate abatement. As I will discuss, however, the Regulatory Compliance Facilities also include a carbon slurry system, new river intakes, filter improvements, changes in the form of disinfectant and upgrades to the Supervisory Control and Data Acquisition ("SCADA") system.

Q. Has the Commission previously reviewed the Company's plan to construct the Regulatory Compliance Facilities?

A. Yes. The analysis which led to the decision to construct the Regulatory Compliance Facilities and resulting construction plans were reviewed by the Commission in Docket 99-0449, in which financing for the Facilities was approved. In that proceeding, the Commission concluded that the decision to construct the Facilities and associated use of funds is reasonable and appropriate. Docket 99-0449; Order, p. 10.

Q. Has there been any change of circumstances related to the Regulatory Compliance Facilities since issuance of the Order in Docket 99-0449?

A. No. The information discussed below and by Mr. Winegard is essentially the same as that reviewed by the Commission in Docket 99-0449 in concluding that construction of the Facilities is reasonable and appropriate.

Q. Why is it necessary to expend funds for the control of nitrates in the Vermilion County Division?

A. CIWC is subject to all applicable regulations related to the Environmental Protection Act, the 1974 Safe Drinking Water Act ("SDWA"), the 1986 Amendments to the Safe Drinking Water Act, and the National Pollutant Discharge Elimination System ("NPDES"). CIWC draws its water from Lake Vermilion ("Lake"). Nitrates, a common fertilizer component, are washed into the Lake as a result of run-off from the 300 square mile agricultural area surrounding the Lake. The IEPA has determined that, at times, the nitrate levels in the water of Lake Vermilion exceed the federal nitrate primary drinking water standard of 10 mg/l. Specifically, since the Company began compliance testing in 1978, there have been 23 separate nitrate violations, lasting in duration from 7 days to 184 days. The highest level recorded by the IEPA was 15.6 mg/l which occurred on May 4, 1992.

To bring CIWC into compliance with the federal nitrate primary drinking water standard ("Standard"), the IEPA required CIWC to execute a Letter of Commitment (the "Commitment") in the summer of 1992. Under the Commitment, CIWC was required to bring the nitrate levels in the water it supplies to customers to levels in compliance with the Standard by April 1, 1997. The Standard is an absolute maximum permitted concentration which must be adhered to at all times. Due to the method of IEPA compliance testing, which occurs once per week, it is important that a reasonable safety margin (*i.e.*, concentration level below the maximum, which prompts corrective action) is taken into consideration. The Commitment required CIWC to notify its customers of nitrate levels at or above 8.5 mg/l and to offer bottled water for infants who are most at

risk from elevated nitrate levels. Infants six months of age or younger are vulnerable to nitrate-induced methemglobinemia, commonly called blue baby syndrome. Although 8.5 mg/l is not in violation of the Standard of 10 mg/l, IEPA determined that notifying customers and offering bottled water as nitrates were trending toward the Standard provided the best protection to the vulnerable population. The Company was required to continue offering bottled water until the water supply experienced four consecutive weeks below 8.5 mg/l.

Furthermore, the Company is in negotiations with the IEPA concerning an Agency referral to the Illinois Attorney General's office, which will result in a consent decree, compelling the Division to complete the nitrate abatement facilities within a negotiated timeframe.

Q. Please discuss the steps taken by CIWC to address nitrate abatement.

A. CIWC has conducted an evaluation of various means of reducing the level of nitrates contained in the water supply. All recognized methods of nitrate reduction were evaluated. These include (i) side-channel storage; (ii) biodenitrification; (iii) reverse osmosis ("RO"); (iv) aquifer storage and recovery; (v) ion exchange; (vi) nanofiltration; and (vii) groundwater dilution. The analysis of these options was addressed in Docket 99-0449.

Q. Would you discuss the evaluation of these options?

A. Yes. In conducting the evaluation, the Company initially examined data for the period from 1978, when nitrate monitoring commenced, to 1992, the year in which the Commitment was signed. During this period, the nitrate problem had become progressively more serious. The five-year period from 1988 through 1992 had the worst nitrate compliance record for any period since the commencement of monitoring efforts. As indicated above, the highest nitrate concentration during the period, 15.6 mg/l occurred in 1992. The number of violations determined by IEPA, the duration of such violations and number of days above a 9.0 mg/l safety margin were as follows:

TABLE 1

	No. of Violations	Days of Duration Violation(s)	No. of Days At or Above 9.0 mg/l
1978	0	0	0
1979	2	12	56
1980	0	0	49
1981	1	46	133
1982	0	0	14
1983	0	0	35
1984	2	15	49
1985	2	77	126
1986	0	0	35
1987	2	42	112
1988	1	21	91
1989	1	167	168
1990	4	102	196
1991	2	20	98
1992	2	186	189

In consultation with IEPA, the Company determined that, at a minimum, the analysis of alternatives should assume that the option selected would be required to treat a nitrate

concentration of 15.6 mg/l. The Company further assumed that treatment would be required when the concentration was at the level of 9.0 mg/l and above (and, therefore, approaching the 10 mg/l standard). Lastly, again in consultation with IEPA, the analysis assumed that treatment would be required for 186 days per year, the length of the nitrate violation in 1992.

Q. In the evaluation, were any options ruled out on operational grounds?

A. As discussed in Docket 99-0449, four of the options: Side Channel Storage, Biodenitrification, Aquifer Storage and Recovery and Nanofiltration were initially ruled out on operational grounds.

Q. Did the other methods prove feasible from an operational standpoint?

A. Yes. The Company determined that the remaining three methodologies should be analyzed to determine the cost-effectiveness of each. With respect to RO, it was determined from calculations of the industry average capital and operating costs that the method would be prohibitively expensive. There were also concerns over fouling the expensive membranes, and the amount of water that would be wasted in frequent flushing of the membranes as well as waste disposal. For these reasons, RO was withdrawn from further consideration.

Ion exchange was investigated through the use of an ion exchange pilot plant that was operated in the summer of 1994. A University of Illinois graduate student ran this project with oversight by Dr. Vernon Snoeyink, a respected water researcher. The pilot plant program, which resulted in a comprehensive report, indicated that from a unit process standpoint, ion exchange was a feasible method. Subsequent to the pilot study, the Company continued with evaluation by studying the issue of wastewater disposal. This evaluation indicated a concern with the volume of wastewater produced, and the desire or ability for that matter, of the Danville Sanitary District to accept the waste stream. Using the design criteria previously discussed, the ion exchange process would have potentially created a wastewater stream of 36,000 gallons per day, or 6.6 gallons over the 186-day operating period. Due to the volume of wastewater produced, major

upgrades to the wastewater collection system and a related lift station would have been necessary in the vicinity of the plant. This included a flow-equalizing basin, an upsized pump station and wastewater line upgrades at an estimated cost of $ 225,000. Due to the 186 day operating-period, it was also determined that operating costs would be high. Additionally, ion exchange would not produce offsetting cost reductions (e.g. savings on less chemical treatment) because 100% of the plant flow would still be treated by the conventional treatment processes, with a portion then being directed into the ion exchange units for additional treatment. Therefore, ion exchange was feasible. Early indications, however, were that costs would be prohibitive.

The remaining method analyzed was the use of low nitrate groundwater for blending with high nitrate water from Lake Vermilion. From industry experience and discussions with other groundwater supplies in the area, it was known that operating costs, except the electricity to pump the water, should be low. The groundwater would be minimally treated because it would be processed while being blended with the surface water. The location and quantity of the groundwater needed to be determined in order to develop capital costs for the project. Since the groundwater would be transported via transmission main to the existing treatment facility for blending, it was critical to determine the location of a sufficient supply of groundwater. Large diameter transmission main would be laid to the groundwater wells. The length of this pipeline (the diameter was already determined) and the location and number of individual wells (which would all be connected to the transmission main) would be the major determination of the overall capital cost for the project.

Q. Would you further discuss the preliminary cost analysis for the ion exchange and groundwater approaches?

A. Yes. At this stage of the analysis, there was insufficient data available to reach a firm conclusion regarding the capital and operating costs associated with either methodology. It was possible, however, to develop estimated potential cost ranges. The available data indicated that, depending on the associated capital cost, groundwater blending could be

the least-cost option. Also, at the time, other potential benefits of the groundwater approach were identified. These included: (i) an increased source of supply, (ii) a less vulnerable source of supply and (iii) a source of supply which would facilitate efforts to comply with SDWA amendments which were known to clearly target surface water supplies with the Enhanced Surface Water Treatment Rule ("ESWTR"), Disinfection and Disinfection By-Products ("D/DBP"). The approach also could reduce the level of organic contaminants in the water supply. For these reasons, the Company determined to proceed with a study of groundwater in Vermilion County.

Q. What did the Company do to determine the location and quantity of groundwater?

A. Since groundwater appeared to be a viable option, a study similar to that conducted for ion exchange was initiated. The Company consulted with the Illinois State Water Survey ("ISWS") concerning the location of large, sustainable groundwater sources in the vicinity of Danville. Since decades of hydrogeologic study by the ISWS had shown that the groundwater resources in and around Danville were extremely limited, the ISWS directed the Company northwest of Danville. In the area selected, it was thought that an extension of the Teays-Mahomet Bedrock Valley, which was known to traverse Vermilion County near Hoopeston, would possibly extend southward toward Danville. As I have previously stated in my testimony, the location of the groundwater supply was critical to developing capital costs for the project, as the majority of costs would be the result of pipeline construction.

The Company retained Northern Environmental, Inc. to coordinate seismic refraction studies within public right-of-ways in the target area. This was completed in June 1993. The seismic refraction data indicated possible water bearing formations near the Village of Henning. The Company began negotiating with landowners in the area to conduct groundwater testing to determine the physical attributes of the aquifer, quantity and quality of water as well as the safe yield of the aquifer. The Company was not successful in its attempts to negotiate with landowners to obtain the land rights needed for testing and, therefore, requested and was granted the authority to condemn temporary

easements to five parcels of land in ICC Docket 95-0237. The Commission's Order, however, was appealed with the result that the testing of sites in the target groundwater area was delayed.

While Court proceedings continued, the Company was successful in locating one landowner, CSX Transportation, Inc., willing to allow testing on its property. Groundwater test holes were drilled at seven different locations along the CSX railroad right-of-way. These test holes, although within the test area, were aligned in a narrow linear fashion. In and of themselves, they provided useful data. Because of the location of the tests, however, the data was not sufficient to fully assess the area resources.

Q. Was the Company successful in obtaining the land rights needed to conduct further groundwater tests?

A. Yes. The Appellate Court ultimately upheld the Commission's Order. The landowners sought review of the Appellate Court's opinion in the Supreme Court, but the Supreme Court refused to hear the appeal. The Company also was successful in resolving the condemnation proceeding filed against the landowners in circuit court (which also was appealed).

Q. Were additional groundwater tests conducted?

A. No. While the litigation regarding groundwater tests was pending, the Company continued its consideration of data and alternatives. Based on this consideration, it was determined that, although authorized, the groundwater tests should not go forward.

Q. Please discuss the information that was developed.

A. As explained above, the Company assumed in its preliminary analysis (based on the data available at the time) that the nitrate treatment process would be required to operate 186 days each year. This assumption had a significant affect on the cost analysis. With regard to ion exchange, which has higher daily operating cost but lower capital cost as compared to groundwater option, the assumed duration of operation (186 days) raised the

overall cost and Present Value Revenue Requirement ("PVRR") for the approach. Groundwater blending, on the other hand, has a high fixed cost component, and is not as greatly affected by the assumption regarding the number of days of operation. Accordingly, an increase in the number of days of operation in the analysis tends to raise the relative cost of ion exchange as compared to the groundwater approach. As new data became available, the Company determined that the initial assumption with regard to the number of required days of operation should be reduced. For the reasons discussed, this change reduced the relative cost of ion exchange as compared to groundwater blending.

Q. Were there other considerations affecting the groundwater study?

A. Yes. Additional data relating to the groundwater option became available in the period of 1997 and 1998. These data concerned the amount of water available in Lake Vermilion (and the potential need for a supplemental source of supply). Also, the amendments to the SDWA became effective in 1996. Following the drought of 1990, the Company sought to determine the exact quantity of water in Lake Vermilion and conducted various "safe yield" calculations based upon drought frequency. To this end, the Company retained the services of the Illinois State Water Survey in 1997 to conduct a safe yield and sedimentation survey of Lake Vermilion. Part of this work, the safe yield survey, was available in late 1997. This report indicated there would be adequate water in Lake Vermilion for the near future (30 years). Additionally, the sedimentation survey became available in early 1999. The survey confirmed the safe yield study. The SDWA amendments indicated that, although there were more stringent standards concerning D/DBPs, the impact of turbidity and microbial contaminants would be less problematic than originally thought. All of these factors indicated a reduced need for a groundwater source of supply.

Q. Please provide recent data regarding the number of nitrate violations, number of days duration of the violations and number of days with nitrate concentrations at or above 9.0 mg/l?

A. That data follows:

TABLE 2

	No. of Violations	Days of Duration Violation(s)	No. of Days At or Above 9.0 mg/l
1993	0	0	0
1994	0	0	0
1995	0	0	6
1996	1	48	63
1997	1	7	21
1998	0	0	56
1999	2	21	91
2000 through March	0	0	0

Q. What do the data indicate?

A. The data shown in Table 1 indicates that two or three years of consecutive low nitrate violation frequency could be expected (*e.g.*, 1982 (0 standard exceedances and 14 days at or above 9.0 mg/l); 1983 (0 standard exceedances and 35 days at or above 9.0 mg/l)). As a result, the favorable data for the years 1993-1995 (0 standard exceedances and six days at or above 9.0 mg/l for the three-year period) in isolation is not significant. The recent data in Table 2 covering 1993 - February 2000, however, clearly demonstrates a long-term decline in the expected frequency and duration of nitrate violations.

Q. Is there an explanation for the change in the observed conditions?

A. Yes. In 1991, the Company was granted a permit from the Illinois Department of Transportation, Division of Dam Safety (now known as the Illinois Department of Natural Resources, Division of Dam Safety), to raise the level of Lake Vermilion by five

feet. This was accomplished in late 1991 and into early 1992. With the raised lake level, nearly 100 acres of wetlands were created at the northern end of Lake Vermilion. A well-known benefit of wetlands is to provide biological removal of nitrates as well as offering numerous other benefits. The Company believes that following the initial acclimation of the newly formed wetlands in 1992, they have worked as efficient nitrate reducers since.

Similarly, in 1993 the Company approached the Vermilion County Farm Bureau about forming a watershed protection group in an attempt to reduce nitrate concentrations in Lake Vermilion. After working through the mission and membership of this group, it was officially launched in early 1995 as the Lake Vermilion Water Quality Coalition ("Coalition"). The work of this group has centered on producer education and modifications to agricultural practices in the watershed. To this end, the Coalition has secured a USEPA 319 Watershed Protection Grant and has planted "test plots" in each of two years to demonstrate reduced nitrogen application does not adversely impact corn yields.

The result of this watershed protection work and the natural "scrubbing" of nitrates by the wetlands have resulted in a less severe nitrate problem in the Lake.

Q. What was the significance of this information with regard to the groundwater study?

A. With modified assumptions, the relative cost of the ion exchange approach was reduced to the point that groundwater blending could not qualify as the least-cost option. Based on updated data, the Company determined that the treatment process could be expected to operate a total of approximately 90 days over a three-year period. On an annualized basis, 30 days of operation (as compared to 186 in the prior analysis) is expected. This change in assumptions reduced the relative cost of the ion exchange approach. An assumption that adequate groundwater for blending would be found at the closest possible location (an assumption which may very well be incorrect) produces the minimum possible cost for the groundwater approach. Even with this assumption (i.e., assuming the least possible cost for groundwater blending), the ion exchange approach has a lower PVRR. For this reason, it became unnecessary to determine whether or not adequate groundwater was, in fact, present at the closest or other identified groundwater test sites and groundwater tests were discontinued.

Q. Please discuss the final analysis of the alternatives.

A. Because the appropriate assumptions with regard to the nitrate problem had changed, the Company re-examined all of the alternatives. Also, as noted above, the SDWA amendments were enacted in 1996. Therefore, in conjunction with the re-examination of alternatives, the Company also reviewed the impact of the 1996 SDWA amendments on the Company's water treatment process. The Company retained Consoer Townsend Envirodyne, Inc. ("CTE"), a consulting engineering firm, to assist with this analysis. This analysis is included in the report sponsored by Mr. Winegard and marked as CIWC Exhibit 10.1.

Q. Were any of the options previously eliminated on operational grounds restored in the final analysis?

A. Yes. Based on the reduction in the number of days of operation, and, thus, a considerably lower amount of storage volume being necessary, Side Channel Storage was no longer ruled out from an operational standpoint.

Q. Please discuss the analysis of Side Channel Storage?

A. In 1998, the Company approached two landowners whose property encompassed strip-mine areas west of Danville. One landowner was unwilling to reasonably negotiate with the Company, while the other landowner was cooperative. Additionally, the Company obtained an option on a third parcel of property to determine the feasibility of constructing a side channel reservoir. The resultant study by a consulting engineering firm, Daily and Associates ("Daily"), indicated that side channel storage at either the location of strip-mine area of the receptive landowner or the area on which the Company had obtained an option were prohibitively expensive. Cost data from Daily's analysis was used by CTE in examining this alternative.

Q. Are there some costs which are common to each alternative studied?

A. Yes. Each analysis includes costs incurred to date for the nitrate project. Also, each alternative includes costs for certain improvements to the CIWC system, which are recommended by CTE in their report. These improvements include a carbon slurry system, filter improvements, constructing a new river intake and upgrading the SCADA system. Each of these improvements is required to meet water quality concerns.

Q. Would you further explain the need for the improvements common to the alternatives?

A. Yes. The bulk carbon facility (also referred to as a carbon slurry system) would supplement the existing bagged carbon system. The new bulk carbon facility would take a full truckload of powdered activated carbon ("PAC") and, with the addition of water in